# Rhode Island Water Resources Board
# Water Management System Implementation Team

## Meeting Minutes
Wednesday, October 6, 2004

**Action Items:**
Prepare elliptical chart narrative
Prepare 5-percentile basin ratios: USGS (caveat: there are very few data points
Identify cold water streams and protected areas
Lower Blackstone Municipal Workshop presentation by Beth Collins
Begin to develop the revised State Guide Plan Element and revised section of Handbook 16.
Continue attempts to identify knowledgeable individual from MA to participate, coordinate & partner on water resource management bi-state issues. Jan Reitsma offered assistance on this action item.

**Continue to submit comments, recommendations, and additional information to Kathy Crawley or Beverly O'Keefe on draft water budget materials: Chapter 1 and Chapter 2.**

**1. Welcome and Approval of Minutes -**

Mr. Dan Varin called the meeting to order at 9: 15 a.m. He welcomed attendees to the sixth meeting of the Water Resources Board Water Management System Implementation Team. He requested approval of the September 1, 2004 meeting minutes. A motion to approve the minutes was made by and seconded. The minutes were approved with no corrections or additions. Mr. Varin next turned the meeting over to Ms. Kathleen Crawley, meeting facilitator.

Ms. Crawley welcomed members and referenced materials that will support today's discussion that include:

September 30, 2004 Email Attachments and References
1. October 6, 2004 Meeting Agenda
2. September 1, 2004 Implementation Team meeting minutes
3. Technical sub-committee September 20, 2004 minutes
4. Draft municipal template (a municipal fact sheet template, rev.)
5. The revised Blackstone Fact Sheet that combines surface and ground water availability totals
6. Water Management System Elliptical chart (PowerPoint document)

Meeting Handout Materials
1. EPA Protecting Water Resources with Smart Growth manual, Table of contents & pps 11-14, 20-21
2. Local Land Use Decision-Making (Land Use 2025) draft, Statewide Planning Program

She stated that today's meeting would focus on a discussion surrounding the "Elliptical Chart" on developing a statewide and regional approach to water management, and the findings from the Technical subcommittee.

Referring to the elliptical chart, she noted that the "white" areas identify the current work to identify regional and local management options for a statewide approach. She asked members to continue submitting responses and recommendations to the distributed materials and discussion items. Staff will continue to refine the

document based on the review comments. Ms. Crawley introduced Dr. Anne Veeger who has agreed to present the Technical Sub-committee findings.

**2. Technical Sub-Committee Report:**

Dr. Anne Veeger presented the Technical Subcommittee findings and noted that the subcommittee met twice with the purpose to create a foundation to protect current and new uses of the water resources. She stated the USGS studies are the benchmark used by Technical subcommittee. Ms. Emily Wild, USGS staff, provided flow duration curves of the Pawcatuck and Blackstone resource. The group reviewed the results of the 25th percentile – a statistical representation of the period of record that equates to 1 in 4 years there will be less water; members felt that this was a good planning tool but not conservative enough for allocation purposes. They recommended the use of the fifth percentile based on 1 in 20 year occurrence for allocation.. Members continued to question whether we have enough data to use this figure, and ultimately decided that there is not enough data but this problem can be surmounted by using one of the other percentiles and a basin ratio that compares current water use to long-term availability. The subcommittee recommends this approach based on this rationale: there are caveats:

a. Ratios work well with ground water but surface water requires safe yield and release considerations; we must also protect cold water streams.
b. We can develop a ranking system to identify stressed basins at the watershed level, and then sub-basin level.
c. Groundwater base flow does not include precipitation – a more conservative approach
d. Using the watershed level we take into consideration the differences of areas. For example, glaciers created oddly shaped water bearing deposits of sand and gravel so that in some regions, like the Pawcatuck, where withdrawals are dependent on upstream flow that comes from other sub-basins.

**Question**: What is meant by no storage capability in groundwater?

**Response**: Tricky part. If we pull the water table down, the stream goes dry. The concept of storage between ground and surface water. The studies were done looking at sub-basins, not cumulatively.

**Statement**: The RI EPC has been looking at allocate-able water at the basin, and then sub-basin level. The interplay is important.

**Statement**: I am glad you have discussed basins and sub-basins. I forwarded an important article that identified 4 studies that mention downstream impacts from upstream impoundments. Article suggests the some allocation be provided to the ecosystem and the method for allocation on a sub-basin level.

**Response**: The ecosystem is considered an existing user in the proposed water management system.

**Statement**: My concern is similar, in that the development of a water management system must not go past a critical threshold. Should there be a commitment to optimize the resource? Should this be applied at all levels? Do we have an obligation to optimize the systems?

**Statement**: It is important to note this is for conceptual planning purposes for land use planning. It has to remain at this level as we don't have enough detail. It doesn't create approval for pumping, or optimization work – like in the Pawcatuck. That is a more sophisticated analysis and we don't have the data now. We must keep this in mind and provide guidance to towns for their planning purposes.

**Response**: The local communities will look at their plans and building schemes based on the information we provide them; our job is to support them. Watershed planning can occur and support the major suppliers. In order for towns to plan and consider the resource, it must be tied to the watershed.

**Statement**: In the article, mentioned above, one problem is freshwater release to the estuary. A problem for the development of an intergovernmental agreement – this has not been achieved in the examples highlighted in the article.

**Question**: Do we have a narrative that describes the elliptical chart? Where are we going? What is the end game? We're talking about managing between the municipalities. Who decides who gets what? I still want to know what the number is. KCWA recent actions is an example. There is plenty of water available but no permit. When do we get to the point and know how much water there is. Another example is the North Smithfield area where there is not enough water to supply a developer who has built condos and can't attach to the public water supply.

**Statement:** I agree. Is this a planning exercise or a permitting process? We don't have the answer. How much do you need? This doesn't help the decisions on the ground. We need to work with case studies. Will it make a difference for agencies?

**Response:** Andy has identified a problem that I have been anticipating. How do you get towns to make decisions? We have to develop a process for resolving disputes. Towns want more water, or use water to hold down growth. I don't know how we are going to do it.

**Statement:** I thought we were developing a data-base to aid planning and now I'm hearing about a dispute resolution process.

**Facilitator:** We are introducing the idea of water as a resource that should be allocated. We're not there yet but the current work gives us some data so we can inform land use decisions.

**Statement:** Andy raises good questions. A 2nd committee to develop dispute resolution might be good. The issue of property tax should be discussed – identified. Perhaps the Governor should be asked to look at that process.

**Response:** I think we do have sufficient data so that we can provide information at the local level to ask if there is enough water.

**Statement:** I think the way to get closer to allocation is to use the modeling studies but still we don't have enough data on withdrawals. This should be considered.

**Response:** We do have technical facts. The data is metered but confidential for the optimization work, and the summaries are reported in the studies. Models have data allocation points that will get a withdrawal concern.

**Statement:** We're here to help the WRB manage the resource. Developers go to the water supplier and they need to know how much water is needed for planning purposes. We should look at what we are doing, look at the people withdrawing the water. It's not the planning board. I'm concerned municipalities are not the right level to work with.

**Statement:** We're looking at availability. As you look at the sub-basin you know you have downstream impacts where-ever you are in RI as it is a small state. We must stay focused. Industry has left the state freeing up the PWSB to use water as needed in the state. Consider Roy Carpenter's Beach that is a small area with no plumbing – compost toilets. Current residential water use on a per capita basis probably exceeds water use of industry. Riparian

law sets our system of water use patterns here in the East. It's not time to look at development yet. We need to look at what is. The real issue is how to make more water available.

**Response:** Back to the issue of optimizing use.

**Statement:** No, that won't do it. Something is going on. There are impoundments all over the place. We must deal with the storage issue and how to make water work .

**Statement:** Implement on the municipal level. I have two ideas: 1 – the issue of water as a commodity vs. water as a resource. The state oversees the resource. We understand how government affects commerce. If we let the water suppliers determine use of the water, it is not in their interest to consider water conservation and the environment. Do municipalities have taxing authority?

**Statement:** I disagree. We have been able to reduce our peak demand and acquire more land to protect our water. My colleagues in South County have property to protect the water supply. We manage the lands.

**Statement:** You are responsible but it seems to me that the choice of the water supplier most often will be towards more development.

**Statement:** Delegation of responsibility to the municipalities by providing the data won't be enough. The data needs to be used in a useful way. For example, technical assistance to understand the data.

**Response:** The Enabling Act covers this. We have tools. A State Guide Plan Element will come from this work and a revised section of Handbook 16. There will be precise language requirements for the municipalities as precedence as municipalities respond to affordable housing mandates. We will need some mechanism to evaluate thresholds in municipalities. The North Smithfield case where the developer got approval to build a condo unit, and he assumed he had approval for water – but he didn't. I hope we can develop a better process. A continuum is needed….Henry may be at one end of the continuum while the other end is that a water supplier does not speak to anyone else in Town Hall. Metering is widespread in Rhode Island. WRB's response was to conduct a study on voluntary reporting, and we will see how this works. I have faith that it will work.

Break

**3. Development of Guidance and Toolkit to Municipalities**
**Blackstone Valley Buildout Analysis, Beth Ashman Collins**

Ms. Crawley introduced Beth Ashman Collins, RI Economic Policy Council, who provided an update on the development of guidance and toolkit for municipalities based on the Blackstone Valley Buildout Analysis and interviews with local planners and government leaders.

Beth reported that she has been working to develop the "Lower Blackstone" framework, and the build-out analysis during the last month that will result in a workshop designed for local planners and government leaders. The first workshop of two is planned but there is no set date at this time. Part of her work is looking at impervious surface calculations, reviewing quantity, quality and impacts of urbanization on the ecosystem. She plans to look at build-out scenarios and provide a presentation on first level findings that will be simple but explicit, providing high and low values of consumptive water use. Beth has spoken with planners in the Blackstone Valley and found that the build-out projections were high. For example, 15% v 40% of land is un-developable in Burrillville. She reported that the worksheet will be presented on the sub-basin level but focus on the watershed. She hopes that this type of presentation will help to determine what types of questions on water use and land cover need to be answered for municipalities.

Ms. Collins stated use of the buildout analysis is limited over time as a result of many variables that include census updates, population growth, changes in land development regulations, up-zoning and the use of bonus points to fulfill economic goals. She plans to use GIS maps with a scenario format to reflect choices that will need to be made by municipalities. She also plans to include impacts on impervious surfaces. The water availability ratio will be used to measure impacts. Best management practices and land development goals for watersheds will be available "tools" for the municipalities.

**Facilitator:** The Smart Growth Water Resources manual developed by EPA is a resource. Today, we have made available to members copies of the section on Regional BMPs.

**Statement:** As Chairman of the Planning Board, I can report that we have issued a "Request for Proposal" for a buildout analysis. It sounds like you will be doing a buildout analysis on the lower Blackstone. I recommend you (Beth) contact Vin Murray, our planner, who may be able to provide assistance.

**Facilitator:** The McGuire Group has recently completed the Phase II Supplemental Water Studies, and they may be a resource for mapping and buildout analysis information for RI EPC. This group has looked at water sources. It would be beneficial to use similar terminology across studies.

**Statement:** I have two comments. First, there seems to be a mismatch of sophisticated tools and local towns. Not all towns have planners and many don't know how to use these sophisticated tools. Second, not all planners make decisions. The WRB should encourage Smart Growth to collaborate on a water management module. This would be a win-win situation as education is important.

**Question:** When would the workshop be held as Implementation Team members might want to attend? Perhaps a preview presentation could be held for members. Ms. Collins agreed that a brief presentation could be made available at the November meeting.

**Facilitator:** I'm encouraged by the work done by Ms. Collins. In the mid-60's the RI Development Council did an analysis and used zoning in place, wetland, and assumptions about communities w/o completing a full analysis and projected 4 million people. Since then, there are more laws, protection of land – many variables have changed, and many things have improved since the 1970s. Planning zoning requirements and the issue with non-conforming uses phase-out have helped to decrease the number of complaints and building violations in the community.

**Recommendation:** The Open Space Bond is coming up, and RI DEM has incremental data available for a starting point. Money could be made available for riparian work as we (EPA) want to enable folks to do the right thing.

**Facilitator:** We want to hear from you. In the meantime, we will be working on the draft, developing the buildout pieces together. Our goals and process remains - to foresee and protect. Mandatory local comprehensive plans and water supply system management planning will help us to do this.

**Request:** I would like to see progress on voluntary reporting at the next meeting if we are still tracking for a January launch date of the pilot project.

**Response:** We have completed preliminary work on this but it may not be available for the November meeting. We continue to track for January. The Implementation Team report will be presented to the WRB at that time.

**Question:** There was a comment that there is an increase in residential use. What are we doing with the residential use data? We should look at the major use categories, not just the agricultural community and then a water conservation/education program.

**Comment:** The coefficients don't capture the seasonal fluctuations of usage. We need to collect information from the towns on number of added homes, hook this up with water suppliers data, and then we might have a figure to work with.

**Comment:** The per capita use patterns have shifted from industry to residential use. It used to be that people would go to the fire stations to take a shower. Friday nights were for men; Saturday for women's showers.

**Facilitator:** It will be essential to know the "what is" of agricultural use so that we can protect it. The farming community has repeatedly stated that "one inch of water per acre per week" is the requirement.

The next meeting is scheduled for Wednesday, November 3, 2004. The meeting was adjourned at 11:00 A.M.

Respectfully submitted,

Beverly O'Keefe
Supervising Planner

Meeting Attendees:

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|---|---|---|
| Bettencourt | Al | RI Farm Bureau |
| Bray | Erin | Brown University |
| Campbell | Jim | US Geological Survey |
| Cassidy | Mike | |
| Collins | Beth | RI Economic Policy Council |
| Combs | Walter | RI Department of Health |
| Crawley | Kathy | RI Water Resources Board |
| Dzykewicz | Andrew | RI Economic Policy Council |
| Griffith | Robert | RI Water Resources Board |
| Hunter | Johanna | EPA |
| Johnson | Ariana | RI EPC |
| Kerr | Meg | RI Rivers Council |
| Kilduff | Bob | Providence Water Supply Board |
| Mariscal | Juan | Warwick Sewer Authority |
| Marks | Eugenia | Audubon Society of RI |
| Meyer | Henry | Kingston Water District |
| O'Brien | John | RI Dept of Admin-Statewide Planning |
| OKeefe | Beverly | RI Water Resources Board |
| Pannetier | Eileen | Comprehensive Environmental Inc. |
| Reitsma | Jan | General Public |
| Scott | Elizabeth | RI Environmental Management |
| Sobel | Allison | Brown University |
| Varin | Daniel | Chairman, RI Water Resources Board |
| Veeger | Anne | Univ. of RI-Geosciences |
| Ward | Harold | Pawcatuck Watershed |
| Wild | Emily | US Geological Survey |